

- 1 -

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

GLOCK et al

SERIAL NO. 10/070,936

FILED 08/09/2002

Group Art Unit 1616

FOR: Herbicidal Composition

Examiner: Sabiha Qazi

Commissioner of Patents and Trademarks

Washington, D.C. 20231

DECLARATION UNDER RULE 132

I, Jutta Glock, a citizen of Germany, residing in CH-4322 Mumpf, Switzerland, hereby declare:

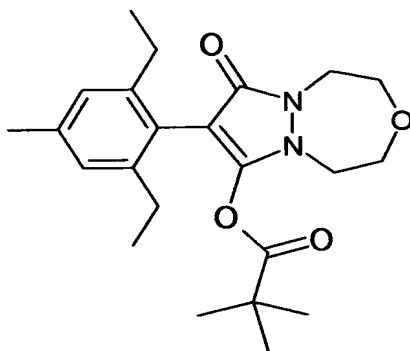
CREDENTIALS

1. That I was awarded the degree of a Ph.D. in Agricultural Biology by the German university of Stuttgart-Hohenheim in 1990;
2. That I have been employed by CIBA-GEIGY AG, Basel, Switzerland as a biologist since 1990 and held the position of a biologist for screening of safeners;
3. That I have been engaged in screening work in the field of safeners for Ciba-Geigy AG since 1990.
4. That I presently hold the position of a Marketing Support Manager for Syngenta
5. That prior to my employment with Ciba-Geigy AG I was employed by the University of Hohenheim as a research assistant from 1986 to 1990 in the "Institut für Phytomedizin" and that I was engaged in research on plant protection and plant physiology (uptake, translocation, metabolism and mode of action of radio labeled herbicides);

COMPARATIVE PROCEDURES

6. That the following tests were carried out under my supervision in a greenhouse in Stein/Switzerland to determine the herbicidal action of the following compositions according to the present invention:

compound A of the formula



in combination with one of the co-herbicides mentioned in the Table, and to compare this herbicidal action with the herbicidal actions observed for compound A and the respective co-herbicide, each taken alone.

7. The method employed was as follows:

Target weeds were grown in the glasshouse in 10cm square pots at a rate of approximately 30 grass plants per pot, or 3 to 5 broadleaves, in a standard compost, to the 2 to 3 leaf stage.

Compound A was applied at 7.5 and 15 gai/ha to 3 replicates of target species. Each mixture herbicide was applied at rates between 5 and 10gai/ha to a single replicate of target plants. Treatments, diluted in RO water (deionised by reverse osmosis process), were applied at a spray application volume of 200l/ha. Treatments were applied to the foliage of

the 4 grass and 4 broad leaved weeds using a tracksprayer with a calibrated single flat fan nozzle. After spray application, plants were placed in a cool glasshouse bay, set to 12/16°C. Visual ratings of % herbicidal effect were made 22 days after treatment, where 0 = no effect and 100 = total kill. Data for compound A alone were meaned over the 3 replicates, the mean is shown on the results table.

After assessment the observed results were compared with the " Colby " expected results as a test for synergy using the formula 'Expected' result for (a+b) = $a + b - (ab/100)$, where a and b are the 'observed' results for a and b on their own (ref Colby 1967).

These data are summarised in the Table below [AMARE (*Amaranthus retroflexus*), SETVI (*Setaria viridis*), STEME (*Stellaria media*)]. Observed results which are superior to the expected results according to Colby are indicative of synergy.

Table:

Treatment	Compound A (g/ha)	Mixture partner (g/ha)	SETVI Obs.	SETVI Exp.	AMARE Obs.	AMARE Exp.	STEME Obs.	STEME Exp.
Compound A	7.5 15		3 20		2 3		2 3	
Amidosulfuron		5	0		98		50	
Compound A + Amidosulfuron	7.5	5	25	16.7	100	98.1	87	51.7
flucarbazone		10	89		86		25	
Compound A + flucarbazone	15	10	96	91.6	93	86.0	45	35.0

CONCLUSIONS

11. The results obtained for the herbicidal mixtures of compound A with a co-herbicide and summarized in the Table are superior to the results expected according to Colby. This observation is clearly indicative of synergy. T

FINAL STATEMENT

I, Jutta Glock, declare further that all statements made herein of personal knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section §1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

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17.03.05


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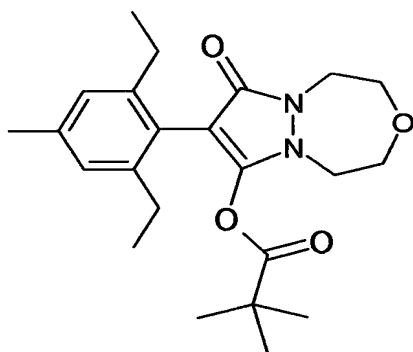
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Compound A was applied at 7.5 and 15gai/ha as an emulsion concentrate to 3 replicates of target species. Each mixture herbicide was applied at rates between 5 and 100 gai/ha to a

single replicate of target plants. Treatments, diluted in RO water (deionised by reverse osmosis process), were applied at a spray application volume of 200l/ha. Treatments were applied to the foliage of the 4 grass and 4 broad leaved weeds using a tracksprayer with a calibrated single flat fan nozzle. After spray application, plants were placed in a cool glasshouse bay, set to 12/16°C. Visual ratings of % herbicidal effect were made 22 days after treatment, where 0 = no effect and 100 = total kill. Data for compound A alone were meaned over the 3 replicates, the mean is shown on the results table.

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These data are summarised in the Table below [AMARE (*Amaranthus retroflexus*), VERPE (*Veronica persica*).]. Observed results which are superior to the expected results according to Colby are indicative of synergy.

Table:

Treatment	Compound A (g/ha)	Mixture partner (g/ha)	AMARE Obs.	Exp.	VERPE Obs.	Exp.
Compound A	7.5 15		3 20		2 3	
Mecoprop		100	55		60	
Compound A + Mecoprop	7.5	100	68	56.5	95	40.0
mecoprop-P		100	72		0	
Compound A + mecoprop-P	7.5	100	80	72.0	5	0.0
Dicamba		20	75		0	
Compound A + dicamba	15	20	83	75.8	20	3.3
Diflufenican		20	55		0	
Compound A +	7.5	20	89	56.5	15	3.3

diflufenican				
Tribenuron		5	94	55
Compound A + tribenuron	7.5	5	97 94.2	68 56.5

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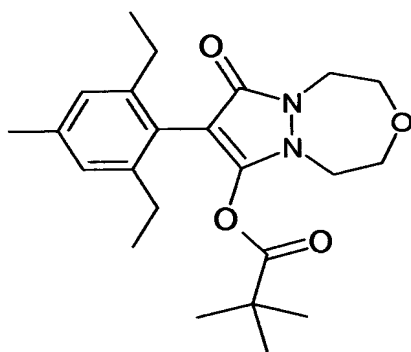
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Target weeds were grown in the glasshouse in 10cm square pots at a rate of approximately 30 grass plants per pot, or 3 to 5 broadleaves, in a standard compost, to the 2 to 3 leaf stage.

Compound A of the formula was applied at 7.5, 15 and 30gai/ha as an emulsion concentrate to 3 replicates of target species. Each mixture herbicide was applied at rates between 5 and

100 gai/ha to a single replicate of target plants. Treatments, diluted in RO water (deionised by reverse osmosis process), were applied at a spray application volume of 200l/ha. Treatments were applied to the foliage of the 4 grass and 4 broad leaved weeds using a tracksprayer with a calibrated single flat fan nozzle. After spray application, plants were placed in a cool glasshouse bay, set to 12/16°C. Visual ratings of % herbicidal effect were made 22 days after treatment, where 0 = no effect and 100 = total kill. Data for compound A alone were meaned over the 3 replicates, the mean is shown on the results table.

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These data are summarised in the Table below [ALOMY (*Alopecurus myosuroides*), LOLMU (*Lolium multiflorum*), SETVI (*Setaria viridis*)]. Observed results which are superior to the expected results according to Colby are indicative of synergy.

Table:

Treatment	Compound A (g/ha)	Mixture partner (g/ha)	ALOMY Obs.	ALOMY Exp.	LOLMU Obs.	LOLMU Exp.	SETVI Obs.	SETVI Exp.
Compound A	7.5 15 30		3 20 72		2 3 85		17 23 89	
Bromoxynil		40	0		5		0	
Compound A + bromoxynil	15	5	60	20.0	82	8.2	86	23.3
Bromoxynil + MCPA		40 + 40	0		0		0	
Compound A + bromoxynil + MCPA	30	40	86	72.3	99	85.0	99	89
Clodinafop		10	15		84		99	
Compound A + clodinafop	15	10	97	32.0	92	84.5	100	99.2
Phenoxaprop		20	40		0		100	

Compound A + phenoxaprop	15	20	89 52.00	90 3.3	100 100.0
MCPA		100	0	0	0
Compound A + MCPA	15	100	50 20.0	94 3.3	94 23.3
Tralkoxydim		50	0	60	45
Compound A + tralkoxydim	15	50	77 20.0	86 61.3	88 57.8
Florasulam		5	0	10	60
Compound A + florasulam	7.5	5	35 3.3	10 11.5	73 66.7
Iodosulfuron		5	45	68	
Compound A + iodosulfuron	7.5	5	50 46.8	86 68.5	
Thifensulfuron		5	35	0	
Compound A + thifensulfuron	7.5	5	55 37.2	5 1.7	

CONCLUSIONS

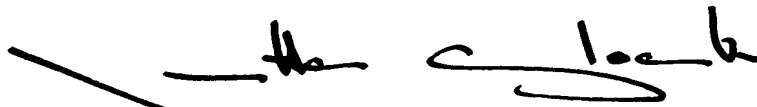
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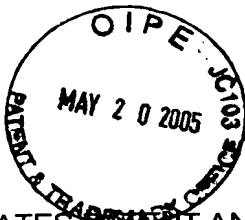
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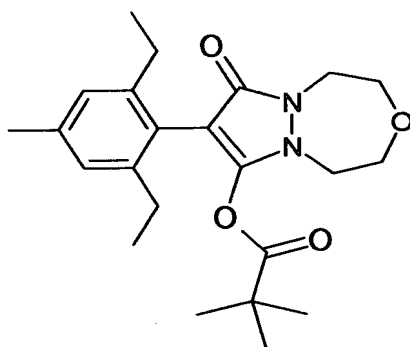
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Compound A was applied at 7.5 and 15 gai/ha as an emulsion concentrate to 3 replicates of target species. Each mixture herbicide was applied at rates between 5 and 400 gai/ha to a single replicate of target plants. Treatments, diluted in water (deionised by reverse osmosis

process), were applied at a spray application volume of 200l/ha. Treatments were applied to the foliage of the grass and broad leaved weeds using a tracksprayer with a calibrated single flat fan nozzle (11002VS), typical for herbicide application. After spray application, plants were placed in a cool glasshouse bay set to 12/16°C. Visual ratings of % herbicidal effect were made 21 days after treatment, where 0 = no effect and 100 = total kill. Data for compound A alone were meaned over the 3 replicates, the mean is shown on the results table.

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Compound A	7.5 15		3 10		0 2		0 0	
Propoxycarbazone		5	73		0		0	
Compound A + propoxycarbazone	7.5	5	78	73.9	0	0.0	25	0.0
Fluroxypyr		40	0		0		0	
Compound A + fluroxypyr	15	40	15	10.0	0	1.7	45	0.0
Metsulfuron		10	77		75		55	
Compound A + metsulfuron	15	10	80	79.3	78	75.4	50	55.0
Triallate		400	0		0		0	
Compound A +	15	400	78	10.0	83	1.7	83	0.0

trialate					
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CONCLUSIONS

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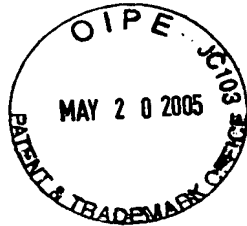
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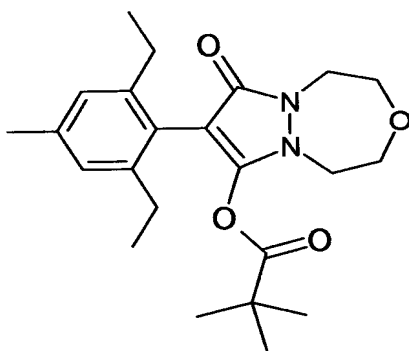
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Compound A	7.5 15 30		3 10 63		0 2 88		0 0 79		2 3 0	
2,4-D ester		100	25		0		0		0	
Compound A + 2,4-D ester	15	100	50	32.5	35	1.7	65	0	40	3.3
2,4-D amine		100	0		0		0		0	
Compound A + 2,4-D amine	15	100	25	10	0	1.7	0	0	15	3.3
ioxynil		40	0		0		0		84	
Compound A + ioxynil	15	40	20	10	0	1.7	30	0	78	45.9
Metosulam		10	0		0		0		100	
Compound A + metosulam	15	10	15	10	0	1.7	30	0	100	100
Prosulfocarb		500	0		50		35		0	

Compound A + prosulfocarb	7.5	500	55	3.3	45	50	67	35	5	1.7
Flupyr-sulfuron		10	87		10		45		92	
Compound A + flupyr-sulfuron	15	10	98	88.3	60	1.5	100	100	100	92.3
Sulfosulfuron		10	90		65		50		63	
Compound A + sulfosulfuron	15	10	90	91.0	78	65.6	70	50	78	64.2
Triasulfuron		5	40		40		5		100	
Compound A + triasulfuron	7.5	5	50	42.0	50	40.0	20	5	100	100
Treatment	Compound A (g/ha)	Mixture partner (g/ha)	ALOMY Obs.	Exp.	LOLMU Obs.	Exp.	SETVI Obs.	Exp.	STEME Obs.	Exp.
Trifluralin		800	0		0		20		45	
Compound A + trifluralin	30	800	85	63.3	99	87.5	95	82.9	60	45.0
Pendimethalin		800	15		0		55		84	
Compound A + pendimethalin	30	800	98	68.8	94	87.5	98	90.4	89	84.0
Picolinafen + Pendimethalin		20 + 400	0		0		20		80	
Compound A + picolinafen + pendimethalin	30	20 + 400	90	63.3	94	87.5	97	82.9	80	80

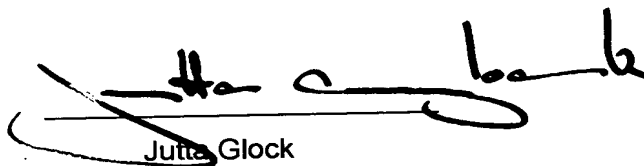
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